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U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

TRANSMITTAL LETTER

Docket Number:
85940/18 (158 US 3)

Application Number
10/035,476

Filing Date
October 25, 2001

Primary Examiner
David M. Naff

Art Unit
1651

Invention Title
**PROCESS FOR THE SIMULTANEOUS
PRODUCTION OF XYLITOL AND ETHANOL**

Inventor(s)
Heikkila et al.

Address to:
Commissioner for Patents
Washington D.C. 20231

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Date: 4-10-02
Donna M. Praiss
Donna M. Praiss (Reg. No. 34,232)

Sir:

Enclosed is a Third Supplemental Information Disclosure Statement and Modified Form PTO-1449 for the above-identified U.S. Patent Application. A copy of each document listed on the corresponding Modified Form PTO-1449 is enclosed.

Copies of the following also are enclosed:

1. Supplemental IDS dated January 31, 2002 and corresponding modified Form PTO-1449 filed in parent application serial number 08/928,893;
2. IDS dated May 10, 2001 and corresponding modified Form PTO-1449 filed in parent application serial number 08/928,893;
3. IDS dated May 3, 2001 and corresponding modified Form PTO-1449 filed in parent application serial number 08/928,893;
4. IDS dated July 8, 1999 and corresponding modified Form PTO-1449 filed in parent application serial number 08/928,893;
5. Examiner's PTO Form 892 dated May 10, 2001 in parent application

serial number 08/928,893;

6. Examiner's PTO Forms 892 dated March 13, 1995 and April 26, 1994 in parent application serial number 07/910,133.

Applicants respectfully request the Examiner to consider the foregoing and also list the references cited in 1-6 on any issuing patent. Copies of the references cited in 1-6 are not being provided herewith because they were previously provided or cited by the Examiner in a parent application. However, Applicants will provide such copies upon the request of the Examiner.

Authorization is hereby given to charge any fees in connection with this Supplemental Information Disclosure Statement and the above-identified Patent Application to Deposit Account No. 11-0600.

Dated: 4-10-02

By: Donna M. Praiss
Donna M. Praiss (Reg. No. 34,232)
Attorney for Applicants

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**THIRD SUPPLEMENTAL INFORMATION
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Donna M. Praiss
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The patents and publications listed below collected by co-counsel for the assignee were located during a prior patent search of the subject application or were cited as references in the assignee's U.S. or foreign patents and patent applications. The patents and publications listed below generally relate to subject matter of the invention. Copies of the listed patents and publications are enclosed for consideration by the Examiner.

Authorization is hereby given to charge any fees in connection with this Third Supplemental Information Disclosure Statement to Deposit Account No. 11-0600.

Onishi et al., U.S. Patent No. 3,619,369 granted November 9, 1971 pertains to a Process For Producing Xylitol By Fermentation.

Liu et al., U.S. Patent No. 4,096,036 granted June 20, 1978 pertains to a Method For The Separation Of Water Soluble Polyols.

Publication: "Biotechnological Production of Xylitol. Part 3: Operation In Culture Media Made From Lignocellulose Hydrolysates", by Juan Carlos Parajo, Herminia Domiquez & Jose Manuel Dominguez of Department of Chemical Engineering, University of Vigo, Ourense, Spain, published by Bioresource Technology 66 (1998), pages 25-40.

Publication: "*Fermentation of Lignocellulosic Hydrolysates For Ethanol Production*", by Lisbeth Olsson and Barbel Hanh Hagerdal of Applied Microbiology, University of Lund/Lund Institute of Technology, Lund Sweden, published by Enzyme and Microbial Technology 18: pages 312-331, (1996).

Publication: "*Alternative Sweeteners Second edition, revised and Expanded*", by Albert Bar, Bioresco Ltd., Brussels, Belgium, edited by Lyn O'Brien Nabors and Robert C. Gelardi of Calorie Control Council, Atlanta, Georgia, published by Marcel Dekker, Inc. pages 349-379 (1991).

Abstract: Japanese Application No. 59-183571 filed August 31, 1984, Publication No. 61-063291 (1063291), published April 1, 1986 of Dai Ichi Kogyo Seiyaku Co., Ltd. pertains to the Production of Xylitol Through Enzymatic Process.

Abstract: Japanese Application No. 60-244968 filed October 30, 1985, Publication No. 62-104588 (2104588), published May 15, 1987 of Nitto Electric Ind. Co., Ltd., pertains to Production of Xylitol.

Abstract: Japanese Application No. 59-1411 filed January 10, 1984, Publication No. 60-145095 (0145095), published July 31, 1995 of Jiyuujiyou Seishi KK, pertains to Preparation of Xylitol By Immobilized Microorganism.

Abstract: Japanese Publication No. 45-24834 (0024834), published August 18, 1970 of Zaidan Hojin Noda Sangyak (Zaid), pertains to Production Of Xylitol By Fermentation.



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	APPLICANTS Heikkila et al.		
	FILING DATE October 25, 2001	GROUP 1651	

U. S. PATENT DOCUMENTS

EXAMINER INITIAL	PATENT NUMBER	PATENT DATE	NAME	CLASS	SUBCLASS	FILING DATE
	3,619,369	11/9/71	Onishi et al.	195	37	7/8/69
	4,096,036	6/20/78	Liu et al.	195	31 F	4/7/77

OTHER DOCUMENTS

EXAMINER INITIAL		AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
		Publication: "Biotechnological Production of Xylitol. Part 3: Operation In Culture Media Made From Lignocellulose Hydrolysates", by Juan Carlos Parajo, Herminia Domiquez & Jose Manuel Dominguez of Department of Chemical Engineering, University of Vigo, Ourense, Spain, published by <u>Bioresource Technology</u> 66 (1998), pages 25-40.
		Publication: "Fermentation of Lignocellulosic Hydrolysates For Ethanol Production", by Lisbeth Olsson and Barbel Hanh Hagerdal of Applied Microbiology, University of Lund/Lund Institute of Technology, Lund Sweden, published by <u>Enzyme and Microbial Technology</u> 18: pages 312-331, (1996).
		Publication: "Alternative Sweeteners Second edition, revised and Expanded", by Albert Bar, Bioresco Ltd., Brussels, Belgium, edited by Lyn O'Brien Nabors and Robert C. Gelardi of Calorie Control Council, Atlanta, Georgia, published by <u>Marcel Dekker, Inc.</u> pages 349-379 (1991).
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EXAMINER	DATE CONSIDERED
EXAMINER: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

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Application Number
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Filing Date
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Primary Examiner
David M. Naff

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addressed to: Assistant Commissioner for Patents, Washington,
D.C. 20231, on

Date 1-31-02 Atty's Reg. # 34,232

Sir:

Atty's Signature Donna M Praiss
KENYON & KENYON

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Dated: 1-31-02

By: Donna M Praiss
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PATENT AND TRADEMARK OFFICE

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Date: 1-31-02

Signature: *Douglas R. Raizer*

(Reg. No. ~~34~~. 232)

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The patents, published patent applications and abstracts listed below were located during a prior patent search of the subject application or were cited as references in the assignee's U.S. or foreign patents and patent applications. The patents, published patent applications and abstracts listed below generally relate to subject matter of the invention. Copies of the listed patents, published patent applications and abstracts are enclosed for consideration by the Examiner.

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W.C. Bauman, U.S. Patent No. 2,684,331 granted July 20, 1954 pertains to a Separation Of Substances Having Different Degrees of Ionization.

R.M. Wheaton, U.S. Patent No. 2,911,362 granted November 3, 1959 pertains to Separation Of Water-Soluble Organic Compounds.

D.B. Broughton et al., U.S. Patent No. 2,985,589 granted May 23, 1961 pertains to a Continuous Sorption Process Employing Fixed Bed Of Sorbent And Moving Inlets And Outlets.

Steiner et al, U.S. Patent No. 3,586,537 granted June 22, 1971 pertains to a Process For The Production Of Xylose.

Jaffe et al., U.S. Patent No. 3,784,408 granted January 8, 1974 pertains to a Process For Producing Xylose.

Melaja et al., U.S. Patent No. 3,928,193 granted December 23, 1975 pertains to a Process For Large Scale Chromatography.

Melaja et al., U.S. Patent No. 4,008,285 granted February 15, 1977 pertains to a Process For Making Xylitol.

Melaja et al., U.S. Patent No. 4,066,711 granted January 3, 1978 pertains to a Method For Recovering Xylitol.

Melaja et al., U.S. Patent No. 4,075,406 granted February 21, 1978 pertains to a Process For Making Xylose.

Gong, U.S. Patent No. 4,368,268 granted January 11, 1983 pertains to a Direct Fermentation of D-Xylose To Ethanol By A Xylose-Fermenting Yeast Mutant.

Sherman et al., U.S. Patent No. 4,471,114 granted September 11, 1984 pertains to Separation of Mannose by Selective Adsorption on Zeolitic Molecular Sieves and corresponds to Finland Patent No. 76593.

Kulprathipanja, U.S. Patent No. 4,857,642 granted August 15, 1989 pertains to a Process For Separating Arabinose From a Mixture of Other Aldoses.

Zinnen, U.S. Patent No. 4,940,548 granted July 10, 1990 pertains to a Chromatographic Separation Process For Recovering Individual Diethyltoluene Isomers.

Kearney et al., U.S. Patent No. 4,990,259 granted February 5, 1991 pertains to a Chromatographic Separator Sorbent Bed Preparation.

Heikkila et al., U.S. Patent No. 5,081,026 granted January 14, 1992 pertains to a Method For The Production Of Xylitol.

Rasche, U.S. Patent No. 5,122,275 granted June 16, 1992 pertains to Simulated Moving Bed Chromatographic Separation.

Heikkila et al., U.S. Patent No. 5,127,957 granted July 7, 1992 pertains to a Method For The Recovery of Betaine from Molasses and corresponds to Finland Patent No. 86416.

Kampen, U.S. Patent No. 5,177,008 granted January 5, 1993 pertains to a Process For Manufacturing Ethanol And For Recovering Glycerol, Succinic Acid, Lactic Acid, Betaine, Potassium Sulfate, And Free Flowing Distiller's Dry Grain And Solubles Or A Solid Fertilizer Therefrom.

Masuda et al., U.S. Patent No. 5,198,120 granted March 30, 1993 pertains to a Process For

Fractional Separation Of Multi-Component Fluid Mixture.

Zinnen, U.S. Patent No. 5,225,580 granted July 6, 1993 pertains to Process For Separating Fatty Acids And Triglycerides.

Nurmi et al., U.S. Patent No. 5,951,777 granted September 14, 1999 pertains to a Crystallization Method.

International Application No. PCT/US89/05572, filed December 14, 1989, International Publication No. WO 90/06796, published June 28, 1990, of The Amalgamated Sugar Company pertains to an Improvement of Chromatographic Separator Sorbent Bed Preparation.

International Application No. PCT/FI90/00015, filed January 15, 1990, International Publication No. WO 90/08193, published July 26, 1990, of Cultor Ltd. pertains to a Method For The Production Of Xylitol From Mixtures Containing Xylose.

International Application No. PCT/US90/07024, filed November 30, 1990, International Publication No. WO 91/08815, published June 27, 1991, of The Amalgamated Sugar Company pertains to a Time Variable Simulated Moving Bed Process.

European Application No. 87119111.0, filed December 23, 1987, Publication No. 0 279 946 A2, published August 31, 1988 of Mitsubishi-Kasei Technoengineers Ltd. pertains to a Method of Chromatographic Separation.

European Application No. 87119111.0, filed December 23, 1987, Publication No. 0 279 946 A3, published August 31, 1988 of Mitsubishi-Kasei Technoengineers Ltd. pertains to a Method Of Chromatographic Separation.

European Application No. 87119111.0, filed December 23, 1987, Publication No. 0 279 946 B1, published August 31, 1988 of Mitsubishi-Kasei Technoengineers Ltd. pertains to a Method Of Chromatographic Separation.

European Application No. 89109081.3, filed May 19, 1989, Publication No. 0 345 511 A2, published December 13, 1989 of Cultor Ltd. pertains to a Method For The Recovery Of Betaine From Molasses.

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European Application No. 89109081.3, filed May 19, 1989, Publication No. 0 345 511 B1, published December 13, 1989 of Cultor Ltd. pertains to a Method For The Recovery Of Betaine From Molasses.

Abstract: French Application No. FR19890000209 filed January 10, 1989, Publication No. FR2641545 published July 13, 1990 of Agrocinq pertains to a Process For The Biosynthesis of Xylitol.

Abstract: Japanese Application No. 62-235014 filed August 21, 1987, Publication No. 64-080409 published March 27, 1989 of Japan Organo Co., Ltd. pertains to a False Moving Bed Device.

CHEMICAL ABSTRACTS, Volume 105, No. 5, 4 August 1986, (Columbus, Ohio, US), J. C. DU PREEZ et al.: "Xylose fermentation by *Candida shehatae* and *Pichia stipitis*: effects of pH, temperature and substrate concentration":, see page 604, Abstract 41196y, & Enzyme Microb. Technol., 8 (6), 360-364 (1986).

CHEMICAL ABSTRACTS, Volume 112, No. 5, 29 January 1990, (Columbus, Ohio, US), M.T. AMARAL-COLLACO et al.: "Utilization of the hemicellulosic fraction of agro-Industrial residues by yeasts:", see page 449, Abstract 34371t, & Enzyme Syst. Lignocellul. Degrad., 221-230 (1989).

CHEMICAL ABSTRACTS, Volume 114, No. 5, 4, February 1991, (Columbus, Ohio, US), K.B. TAYLOR et al.: "The fermentation of xylose: studies by carbon-13 nuclear magnetic resonance spectroscopy", see page 592, Abstract 41014y, & J. Ind. Microbiol., 6 (1), 29-41 (1990).

CHEMICAL ABSTRACT, Volume 98, No. 9, 28 February 1983, (Columbus, Ohio, US), GONG, CHENG SHUNG et al.: "Conversion of pentoses by yeasts:", see page 484, Abstract 70314c, & Biotechnol. Bioeng., 25 (1), 85-102 (1983).

Publication: "*Third European Congress On Biotechnology*", by Weinheim presented in Muchen, Federal Republic of Germany, Volume II (September 10-14, 1984).

Publication: "*Chromatography of Oligosaccharides and Related Compounds on Ion-Exchange Resin*" by Department of Engineering Chemistry, Chalmers University of Technology, Goteborg, Sweden, Advances in Chromatography, vol. 16, pages 113-149 (1978).

Publication: "*The Distribution of Polyalcohols Between Organic Ion Exchangers and Water*" by Malte Mattisson and Olof Samuelson, Department of Engineering Chemistry, Chalmers Tekniska Hogskola, Goteborg, Sweden, No. 7, pages 1386-1394 (1958).

Publication: "*Ion-Exchange Chromatography of Aldehydes, Ketones, Ethers, Alcohols, Polyols and Saccharids*" published in Journal of Chromatography printed by Chromatographic

Reviews, Elsevier Scientific Publishing Company, Amsterdam-Printed in The Netherlands, 98 pages 55-104 (1974).

Publication: "*Xylitol dehydrogenase from Pachysolen tannophilus*" by G. Ditzelmuller, C.P. Kubicek, W. Wohrer and M. Rohr of Institute for Biochemische Technologie and Mikrobiologies, Wien, Austria, pages 195-198 (July 31, 1984).

Publication: "*Fermentation of Cellulose and Hemicellulose Carbohydrates by Thermotolerant Yeasts*" by Linda D. McCracken and Cheng-Shung Gong of Laboratory of renewable Resources Engineering, A.A. Potter Engineering Center, Purdue University, West Lafayette, Indiana, published by Biotechnology and Bioengineering Symp. No. 12, 91-102 (1982).

Publication: "*Conversion of D-Xylose Into Xylitol By Xylose Reductase From Candida Pelliculose Coupled With the Oxidoreductase System of Methanogen Strain HU*" by V. Kitpreechavanich of Department of Microbiology, M. Hayasi, N. Nishio and S. Hagai of Department of Fermentation Technology, published Biotechnology Letter, Vol 6 No. 10, pages 651-656 (1984).

Publication: "*Quantitative Production of Xylitol From D-Xylose By A High-Xylitol Producing Yeast Mutant Candida tropicalis HXP2*" by Cheng-Shung Gong, Li Fu Chen and George T. Tsao of Laboratory of Renewable Resources Engineering, A.A. Potter Engineering Center, Purdue University, West Lafayette, Indiana, published in Biotechnology Letters Vol. 3 No. 3, pages 130-135 (1981).

Respectfully submitted,



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Modified Form PTO-1449

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EXAMINER INITIAL	PATENT NUMBER	PATENT DATE	NAME	CLASS	SUBCLASS	FILING DATE
	2,684,331	7-20-54	W.C. Bauman	210	24	1-11-52
	2,911,362	11-3-59	R.M. Wheaton	210	31	11-24-52
	2,985,589	5-23-61	D.B. Broughton et al.	210	34	5-22-57
	3,586,537	6-22-71	Steiner et al.	127	37	7-16-69
	3,784,408	1-8-74	Jaffe et al.	127	37	9-16-70
	3,928,193	12-23-75	Melaja et al.	210	31	2-14-75
	4,008,285	2-15-77	Melaja et al.	260	635	6-18-75
	4,066,711	1-3-78	Melaja et al.	260	637	3-15-76
	4,075,406	2-21-78	Melaja et al.	536	1	8-28-75
	4,368,268	1-11-83	Gong	435	161	5-15-81
	4,471,114	9-11-84	Sherman et al.	536	127	12-30-82
	4,857,642	8-15-89	Kulprathipanja	536	127	12-31-86
	4,940,548	7-10-90	Zinnen	210	656	4-17-89
	4,990,259	2-5-91	Kearney et al.	210	659	8-26-89
	5,081,026	1-14-92	Heikkila et al.	435	158	11-2-90
	5,122,275	1-16-92	Rasche	210	659	8-5-89
	5,127,957	7-7-92	Heikkila et al.	127	47	11-30-90
	5,177,008	1-5-93	Kampen	435	139	6-18-90
	5,198,120	3-30-93	Masuda et al.	210	659	12-18-90
	5,225,580	7-6-93	Zinnen	554	30	8-16-90
	5,951,777	8-14-99	Nurmi et al.	127	61	5-5-98

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
		Int. Application No.: PCT/US89/05572 Int. Pub. No.: WO 90/06796	Filing Date: 12-14-89 Pub. Date: 6-28-90	PCT			X	
		Int. Application No.: PCT/FI90/00015 Int. Pub. No.: WO 90/08193	Filing Date: 1-15-90 Pub. Date: 7-26-90	PCT			X	
		Int. Application No.: PCT/US90/07024 Int. Pub. No.: WO 91/08815	Filing Date: 11-30-90 Pub. Date: 6-27-91	PCT			X	
		Application No. 87119111.0 Publication No. 0 279 946 A2	Filing Date: 12-23-87 Pub. Date: 8-31-88	Europe			X	

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
		Application No. 87119111.0 Publication No. 0 279 946 A3	Filing Date: 12-23-87 Pub. Date: 8-31-88	Europe			X	
		Application No. 87119111.0 Publication No. 0 279 946 B1	Filing Date: 12-23-87 Pub. Date: 8-31-88	Europe			X	
		Application No. 89109081.3 Publication No. 0 345 511 A2	Filing Date: 5-19-89 Pub. Date: 12-13-89	Europe			X	
		Application No. 89109081.3 Publication No. 0 345 511 A3	Filing Date: 5-19-89 Pub. Date: 12-13-89	Europe			X	
		Application No. 89109081.3 Publication No. 0 345 511 B1	Filing Date: 5-19-89 Pub. Date: 12-13-99	Europe			X	
		Application No. FR19890000209 Publication No. FR2641545	Filing Date: 1-10-89 Pub. Date: 7-13-90	French			X*	
		Application No. 62-235014 Publication No. 64-080409	Filing Date: 9-21-87 Pub. Date: 3-27-89	Japan			X*	

*ABSTRACT

OTHER DOCUMENTS

EXAMINER INITIAL	AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.	
	CHEMICAL ABSTRACTS, Volume 105, No. 5, 4 August 1986, (Columbus, Ohio, US), J. C. DU PREEZ et al.: "Xylose fermentation by Candida shehatae and Pichia stipitis: effects of pH, temperature and substrate concentration", see page 604, Abstract 41196y, & Enzyme Microb. Technol., 8 (6), 360-364 (1986).	
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EXAMINER INITIAL		AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
		Publication: <i>"The Distribution of Polyalcohols Between Organic Ion Exchangers and Water"</i> by Malte Mattisson and Olof Samuelson, Department of Engineering Chemistry, Chalmers Tekniska Hogskola, Goteborg, Sweden, No. 7, pages 1386-1394 (1958).
		Publication: <i>"Ion-Exchange Chromatography of Aldehydes, Ketones, Ethers, Alcohols, Polyols and Saccharids"</i> published in Journal of Chromatography printed by Chromatographic Reviews, Elsevier Scientific Publishing Company, Amsterdam-Printed in The Netherlands, 98 pages 55-104 (1974).
		Publication: <i>"Xylitol dehydrogenase from Pachysolen tannophilus"</i> by G. Ditzelmuller, C.P. Kubicek, W. Wohrer and M. Rohr of Institute for Biochemische Technologie und Mikrobiologie, Wien, Austria, pages 195-198 (July 31, 1984).
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		Abstract: Japanese Application No. 62-235014 filed August 21, 1987, Publication No. 64-080409 published March 27, 1989 of Japan Organo Co., Ltd. pertains to a False Moving Bed Device.
		Publication: <i>"Fermentation of Cellulose and Hemicellulose Carbohydrates by Thermotolerant Yeasts"</i> by Linda D. McCracken and Cheng-Shung Gong of Laboratory of renewable Resources Engineering, A.A. Potter Engineering Center, Purdue University, West Lafayette, Indiana, published by Biotechnology and Bioengineering Symp. No. 12, 91-102 (1982).
		Publication: <i>"Conversion of D-Xylose Into Xylitol By Xylose Reductase From Candida Pelliculose Coupled With the Oxidoreductase System of Methanogen Strain HU"</i> by V. Kitprechanich of Department of Microbiology, M. Hayasi, N. Nishio and S. Hagai of Department of Fermentation Technology, published Biotechnology Letter, Vol 6 No. 10, pages 651-656 (1984).
		Publication: <i>"Quantitative Production of Xylitol From D-Xylose By A High-Xylitol Producing Yeast Mutant Candida tropicalis HXP2"</i> by Cheng-Shung Gong, Li Fu Chen and George T. Tsao of Laboratory of Renewable Resources Engineering, A.A. Potter Engineering Center, Purdue University, West Lafayette, Indiana, published in Biotechnology Letters Vol. 3 No. 3, pages 130-135 (1981).

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

Docket Number:
85940/15

Application Number
08/928,893

Filing Date
September 12, 1997

Examiner
D. Naff

Art Unit
1808

Invention Title
**PROCESS FOR THE SIMULTANEOUS
PRODUCTION OF XYLITOL AND ETHANOL**

Inventor(s)
Heikkila et al.

Address to:
Assistant Commissioner for Patents
Washington D.C. 20231

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on

Date: May 10, 2001

Signature: Christine M. Wilkes
Christine M. Wilkes (Reg. No. 37,967)

1. In accordance with the duty of disclosure under 37 C.F.R. § 1.56 and in conformance with the procedures of 37 C.F.R. §§ 1.97 and 1.98 and M.P.E.P. § 609, attorneys for Applicants hereby bring the attached references to the attention of the Examiner. These references are listed on the attached modified PTO Form No. 1449. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.
2. No fee is believed to be required upon submission of this information disclosure statement because a first Official Action in this continuation application has not yet been received. However, should it be determined that a fee is required, the Commissioner is hereby authorized to charge payment of the fee to the deposit account of **Kenyon & Kenyon**, deposit account number **11-0600**. A duplicate copy of this communication is enclosed for charging purposes.

Dated: May 10, 2001

By: Christine M. Wilkes
Christine M. Wilkes (Reg. No. 37, 967)

KENYON & KENYON
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT	ATTY. DOCKET NO. 85940/15	SERIAL NO. 08/928,893
	APPLICANT Heikkila et al.	
	FILING DATE September 12, 1997	GROUP 1808

U. S. PATENT DOCUMENTS

EXAMINER INITIAL	PATENT NUMBER	PATENT DATE	NAME	CLASS	SUBCLASS	FILING DATE

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	FR A1 2641545	July 13, 1990	France				x*

* See International Search Report for PCT/FI 91/00011

OTHER DOCUMENTS

EXAMINER INITIAL	AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
	Chem. Abstracts, vol. 105, no. 5, 4 Aug. 1986, J.C. Du Preez et al.: "Xylose fermentation by Candida shehatae and Pichia stipitis: effects of pH, temperature and substrate concentration", page 604, abstract 41196y** & Enzyme Microb. Technol. 1986 8(6), 360-364
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	International Search Report PCT/FI 91/00011
	Abstract-JP (8703090): "treating mixed sugar soln...."; 1 page

** journal abstract printout attached

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

COMMUNICATION-IDS

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on

Date: May 3, 2001

Signature: Christine M. Wilkes
Christine M. Wilkes (Reg. No. 37,967)

1. Per the Examiner's Request, attached herewith is another set of copies of the references cited in Applicants' IDS of July 8, 1999. In accordance with the duty of disclosure under 37 C.F.R. § 1.56 and in conformance with the procedures of 37 C.F.R. §§ 1.97 and 1.98 and M.P.E.P. § 609, attorneys for Applicants hereby bring the attached references to the attention of the Examiner. These references are listed on the attached modified PTO Form No. 1449. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.
2. No fee is believed to be required upon submission of this information disclosure statement because a first Official Action in this continuation application has not yet been received. However, should it be determined that a fee is required, the Commissioner is hereby authorized to charge payment of the fee to the deposit account of **Kenyon & Kenyon**, deposit account number **11-0600**. A duplicate copy of this communication is enclosed for charging purposes.
3. Applicants also thank the Examiner for his helpful assistance in locating the afore-referenced application file at the Patent Office.

Dated: May 3, 2001

By: Christine M. Wilkes
Christine M. Wilkes (Reg. No. 37, 967)

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U. S. PATENT DOCUMENTS

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						YES	NO
	WO-A1-88/05467	July 28, 1988	PCT				

OTHER DOCUMENTS

EXAMINER INITIAL	AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
	Dorfner, K., Ion Exchangers, Properties and Applications, Ann Arbor Science Publisher Inc., pp. 44-45.
	Duolite C 464, Weak Acid Cation Exchange Resin, February 1981, 3 pages.
	Zaborsky, O., Immobilized Enzymes, CRC Press, pp. 5-27.
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	Allenza, P., Scherl, D., and Detroy, R., Hydrolysis of Xylan by an Immobilized Xylanase from <i>Aureobasidium pullulans</i> , Biotechnology and Bioengineering Symp. No. 17 (1986) pp. 425-433.
	Jenq, C.Y., Wang, S.S. and Davidson, B., Ultrafiltration of Raw Sewage Using an Immobilized Enzyme Membrane, Enzyme Microb. Technol., April 1980, Vol. 2, pp. 145-147.
	Dekker, Robert F.H., Bioconversion of Hemicellulose: Aspects of Hemi-cellulase Production by <i>Trichoderma reesei</i> QM 9414 and Enzyme Saccharification of Hemicellulose, Abstract 177464d, Chemical Abstracts, Vol. 98, 1983.
	Weckstrom, L. and Leisola, M., Enzymatic Hydrolysis of Hemicellulose From Bisulfite Waste, Proc. Int. Ferment. Symp., 1981, Vol. 2, pp. 21-26.
	Poutanen, K. and Puls, J., Enzymatic Hydrolysis of Steam-Pretreated Lignocellulosic Materials, Third European Congress on Biotechnology, Volume II, September, 1984, pp. 217-223.
	International Preliminary Examination Report for PCT/FI91/00011 and Official Action for FI 900220.
	International Search Report for PCT/FI90/00015.

EXAMINER INITIAL	AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.	
	Hyrkas et al., Heran Laktoosin Hydrolyysi Immobilisoidulla β -Galaktosidaasilla, 1974, pp. 38-47 and English language summary and translation of abstract.	
	Horitsu H: Sugar Alcohol Prepn. by Treating Mixed Sugar Soln. Cong. Substrate Sugar and Hydrogen Donor Sugar with Candida Yeast, Dialog Information Services, File 351, WPI 81-90, Dialog Accession No. 88-297740/42.	
	Amaral-Collaco, et al., Utilization of the Hemicellulosic Fraction of Agro Industrial Residues by Yeasts, Abstract 34371t, Fermentations Vol. 112, 1990.	
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	Weckstrom, L. and Leisola, M., Enzymatic Hydrolysis of Hemicellulose From Bisulfite Waste, Abstract 96:124760z, Wood Products, Vol. 96, 1982.	
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U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

**INFORMATION DISCLOSURE
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85940/15

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Examiner
D. Naff

Art Unit
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Invention Title
**PROCESS FOR THE SIMULTANEOUS
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Inventor(s)
Heikkila et al.

Address to:
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on

Date: 7-8-99

Signature: Donna M. Praiss

Donna M. Praiss (Reg. No. 34,232)

1. In accordance with the duty of disclosure under 37 C.F.R. § 1.56 and in conformance with the procedures of 37 C.F.R. §§ 1.97 and 1.98 and M.P.E.P. § 609, attorneys for Applicants hereby bring the attached references to the attention of the Examiner. These references are listed on the attached modified PTO Form No. 1449. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.
2. No fee is believed to be required upon submission of this information disclosure statement because a first Official Action in this continuation application has not yet been received. However, should it be determined that a fee is required, the Commissioner is hereby authorized to charge payment of the fee to the deposit account of **Kenyon & Kenyon**, deposit account number **11-0600**. A duplicate copy of this communication is enclosed for charging purposes.
3. A copy of each patent, publication or other information listed on the modified PTO form 1449 is enclosed.

Dated: 7-8-99

By: Donna M. Praiss

Donna M. Praiss (Reg. No. 34,232)

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	APPLICANT Heikkila et al.	
	FILING DATE September 12, 1997	GROUP 1808

U. S. PATENT DOCUMENTS

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						YES	NO
	WO-A1-88/05467	July 28, 1988	PCT				

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EXAMINER INITIAL	AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
	Dorfner, K., Ion Exchangers, Properties and Applications, Ann Arbor Science Publisher Inc., pp. 44-45.
	Duolite C 464, Weak Acid Cation Exchange Resin, February 1981, 3 pages.
	Zaborsky, O., Immobilized Enzymes, CRC Press, pp. 5--27.
	Sax, N. and Lewis, Sr., R., Hawley's Condensed Chemical Dictionary, 11th ed., pp. 15 and 893.
	Morrison, R. and Boyd, R., Organic Chemistry, 5th ed., pp. 833 and 839.
	Allenza, P., Scherl, D., and Detroy, R., Hydrolysis of Xylan by an Immobilized Xylanase from <i>Aureobasidium pullulans</i> , Biotechnology and Bioengineering Symp. No. 17 (1986) pp. 425-433.
	Jenq, C.Y., Wang, S.S. and Davidson, B., Ultrafiltration of Raw Sewage Using an Immobilized Enzyme Membrane, Enzyme Microb. Technol., April 1980, Vol. 2, pp. 145-147.
	Dekker, Robert F.H., Bioconversion of Hemicellulose: Aspects of Hemi-cellulase Production by <i>Trichoderma reesei</i> QM 9414 and Enzyme Saccharification of Hemicellulose, Abstract 177464d, Chemical Abstracts, Vol. 98, 1983.
	Weckstrom, L. and Leisola, M., Enzymatic Hydrolysis of Hemicellulose From Bisulfite Waste, Proc. Int. Ferment. Symp., 1981, Vol. 2, pp. 21-26.
	Poutanen, K. and Puls, J., Enzymatic Hydrolysis of Steam-Pretreated Lignocellulosic Materials, Third European Congress on Biotechnology, Volume II, September, 1984, pp. 217-223.
	International Preliminary Examination Report for PCT/FI91/00011 and Official Action for FI 900220.

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	International Search Report for PCT/FI90/00015.	
	Hyrkas et al., Heran Laktoosin Hydrolyysi Immobilisoidulla β -Galaktosidaasilla, 1974, pp. 38-47 and English language summary and translation of abstract.	
	Horitsu H: Sugar Alcohol Prepn. by Treating Mixed Sugar Soln. Cong. Substrate Sugar and Hydrogen Donor Sugar with Candida Yeast, Dialog Information Services, File 351, WPI 81-90, Dialog Accession No. 88-297740/42.	
	Amaral-Collaco, et al., Utilization of the Hemicellulosic Fraction of Agro Industrial Residues by Yeasts, Abstract 34371t, Fermentations Vol. 112, 1990.	
	Onishi et al., The Production of Xylitol, L-Arabinitol and Ribitol by Yeasts, Agr. Biol. Chem., Vol. 30, No. 11, 1996, pp. 1139 and 1144.	
	Weckstrom, L. and Leisola, M., Enzymatic Hydrolysis of Hemicellulose From Bisulfite Waste, Abstract 96:124760z, Wood Products, Vol. 96, 1982.	
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NOTICE OF REFERENCES CITED

07/110133 1800 PAPER NUMBER 17
 APPLICANT(S) Heikkila et al fee: 10/035,476

U.S. PATENT DOCUMENTS

* A	DOCUMENT NO.	DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPROPRIATE
A	5081024	1/1992	Heikkila et al	135	158	1/17/89
B						
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FOREIGN PATENT DOCUMENTS

* L	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUB-CLASS	PERTINENT SHTS. DWG.	PP. SPEC.
L								
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OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

R	
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T	
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EXAMINER  DATE 3/13/95

NOTICE OF REFERENCES CITED

APPLICANT(S)

Hei Hila et al

U.S. PATENT DOCUMENTS

*	DOCUMENT NO.	DATE	NAME	CLASS.	SUB-CLASS	FILING DATE IF APPROPRIATE
A	5047332	9/1991	Chahal	435	42	✓
B						
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FOREIGN PATENT DOCUMENTS

*	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUB-CLASS	PERTINENT SHTS. DWG.	PP. SPEC.
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OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

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EXAMINER

DATE

5/10/01

RECEIVED PTO 10/02/01
UNIT 119 OF 0102 0001

07/910933

1808

APPLICANT(S)

Heukila et al.

NOTICE OF REFERENCES CITED

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*	DOCUMENT NO.	DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPROPRIATE
A	3 6 1 9 3 6 9	11-1971	Onishi	435	158	✓
B	3 6 2 7 6 3 7	12-1971	Jaffe	435	158	✓
C						
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*	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUB-CLASS	PERTINENT SHTS. DWG.	PP. SPEC.
L	9 0 0 8 1 9 3	07-1990	WO	Heukila	435	158		✓
M								
N								
O								
P								
Q								

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

R	Jeffers, J.W. "Enzymatic Removal and Utilization of Hemicellulose from Pulps", Anal. Pap. Am. Chem. Soc. 200 meet, Pt. 1, Cell 55, 1990	✓
S	Ohlmeier-Vogel, E. et al, "Shifting Product Formation from Xylitol to Ethanol in Pentose Fermentation with <i>Candida tropicalis</i> by Altering Environmental Parameters", Ann. N.Y. Acad. Sci., Vol. 434, pp 152-154, 1984	✓
T		
U		

EXAMINER

DATE

Marian Knodel

4/26/94